

4WD-RCRA

SUBJ: Evaluation of International Paper's status under the
RCRIS Corrective Action Environmental Indicator Event
Codes (CA725 and CA750)
EPA I.D. Number: MSD 980 600 084

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I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of *International Paper's* status in relation to the following corrective action event codes defined in the Resource Conservation and Recovery Information System (RCRIS):

- 1) Human Exposures Controlled Determination (CA725),
- 2) Groundwater Releases Controlled Determination (CA750).

The application of these event codes at International Paper adheres to the event code definitions found in the Data Element Dictionary for RCRIS.

Concurrence by the RCRA Programs Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing above. In summary, the following recommendations were made based on the evaluation:

- | | | |
|----|-------|----|
| 1) | CA725 | IN |
| 2) | CA750 | IN |

II. HISTORY OF ENVIRONMENTAL INDICATOR EVALUATIONS AT THE FACILITY AND REFERENCE

This particular CA725 evaluation is the first evaluation performed by EPA for International Paper. The evaluation, and associated interpretations and conclusions on contamination and exposures at the facility, is based on information obtained from the following reference documents:

- 1) RCRA Facility Assessment Report, International Paper Company, July 9, 1991.
- 2) Confirmatory Sampling and/or Structural Integrity Testing Work Plan for Solid Waste Management Units and Areas of Concern, International Paper Company, May 1996.
- 3) Confirmatory Sampling and/or Structural Integrity Testing Results for SWMUs and Areas of Concern, International Paper Company, April 1997.
- 4) HSWA portion of the RCRA Permit, January 04, 1993.

III. FACILITY SUMMARY

International Paper Wiggins facility is located in Stone County, Mississippi, approximately two miles south of Wiggins, MS, east of Highway 49. The subject site is located on 1225 acres, of which approximately 85 acres are currently utilized by plant operations. The subject site is located at latitude 30°51'59", and longitude 89°10'54".

The facility currently treats utility poles, pilings and structural timbers with pentachlorophenol (PCP) and chromated copper arsenate (CCA); previous operations have utilized creosote. Facility operations associated with pressure treating of wood products generated a wastewater stream and associated listed waste (K001). The facility operates a Wastewater Treatment Plant for the pretreatment of process waste waters before releasing to the Wiggins Publicly Owned Treatment Works (POTW).

The facility has five RCRA-regulated units which have undergone a State and EPA approved closure. These units are SWMUs 1, 7, 8, 9 and 10. In addition, the facility also closed five Sludge Pits (SWMUs 2 to 6) under the HSWA portion of the RCRA Permit, dated March 5, 1987. The sludge pits were closed in conjunction with the five regulated units. The facility is

actively involved in a Corrective Action Program (CAP) to remediate ground water impacted by these units. To date, 38 monitoring wells have been installed at the facility; 19 of these wells are currently being sampled in accordance with the CAP.

The RCRA Facility Assessments(RFA) was performed in 1991 on International Paper's Wiggins Treated Wood Plant which identified 38 SWMUs (some of which have multiple subunits) and two (2) Areas of Concern (AOCs). On January 4, 1993, the EPA issued the Hazardous Solid Waste Amendment(HSWA) portion of the RCRA permit (hereafter referred to a the HSWA permit) to the subject facility. The HSWA permit identified forty-three (43) SWMUs or SWMU subunits and two (2) AOCs which required confirmatory sampling and/or structural integrity testing. Refer to Attachment 4 for the list of all SWMUs and Figure 1 for location.

The constituents identified by International Paper for analytical testing during the confirmatory sampling activities were polynuclear aromatic hydrocarbons(PAHs),including phenols; the metals arsenic, chromium, copper, lead, and nickel; total petroleum hydrocarbons as gasoline(TPH-G), total hydrocarbons as diesel (TPH-D), total petroleum hydrocarbons as oil (TPH-O), and methyl ter-butyl ether (MTBE).

To streamline the soil boring and sampling requirements for the confirmatory sampling task, most of the SWMUs were categorized into three groups as follow:

1. Group I consists of those SWMUs associated with the washing, maintenance and fueling of vehicles and equipment (SWMUs 16, 17, 18, and 19).
2. Group II consists of SWMUs associated with, contiguous with, or in close proximity to Treatment Area No. 2 and the Waste Water Treatment Facility (SWMUs 26, 27, 28, 29, 32 and 33).
3. Group III consists of SWMUs associated with, contiguous with, or in close proximity to Treatment Area No. 1 (SWMUs 21, 22, 23, 24 and 25).
4. Other SWMUs and AOCs are grouped together following Group III

IV. CONCLUSION FOR CA725:

Recommendation Option 5 - CA725 IN More Information Needed

As explained in Attachments 1 and 2, though limited groundwater data indicate the presence of groundwater contamination above relevant action levels at two SWMUs (SWMU 21-Treatment Area No.1 and SWMU 25-CCA Tanks), there exists an uncertainty regarding the presence or absence of groundwater contamination at all areas of the facility. Therefore, an opinion on plausible human exposures to groundwater contamination is not possible at this time. Also, there is not enough information at this time to determine if and/or how far the groundwater contaminant plume may extend beyond the boundary, or if it exceeds relevant action levels. Additionally, more data is needed to determine whether the corrective measures conducted in the vicinity of the RCRA regulated units meet the requirement to be protective of human health and the environment. Similarly, though the confirmatory sampling and analysis showed the presence of contaminants, the results do not provide enough information to establish with certainty that human exposure to the soil pathway exists onsite. However, for surface water and air, the determination is that there is no potential for human exposure.

Because, there is not enough information at this time to determine the effect of groundwater and soil contamination on human exposure and human health and the environment, it is recommended that CA725 IN be entered into RCRIS.

V. CONCLUSION FOR CA750:

Recommendation Option 4 - CA750- More Information Needed

Based on the data contained in the documents referenced in Attachment 1 and the discussion contained in Attachments 1 and 2, it is determined that releases to the groundwater have occurred in concentrations above relevant action levels. However, at this time there is insufficient information on groundwater quality at the entire facility or if the known releases are controlled. Therefore, it is recommended that CA750 IN be entered into RCRIS.

VI. SUMMARY OF FOLLOW-UP ACTIONS

As discussed, International Paper has initiated corrective action for the regulated units in accordance with the MDEQ Post-Closure Permit and CAP. The confirmatory sampling analysis has been completed. The facility is in process of developing a RCRA Facility Investigation Work Plan, as required by the HSWA Permit, for the contamination from the SWMUs (releases)

ATTACHMENT 1**A. HUMAN EXPOSURES CONTROLLED
DETERMINATION (CA725)**

There are five (5) national status codes under CA725. These status codes are:

- 1) YE Yes, applicable as of this date.
- 2) NA Previous determination no longer
 applicable as of this date.
- 3) NC No control measures necessary.
- 4) NO Facility does not meet definition.
- 5) IN More information needed.

The first three (3) status codes listed above were defined in January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in June 1997 Data Element Dictionary.

Note that CA725 is designed to measure human exposures over the entire facility (i.e., the code does not track SWMU specific actions or success). Every area at the facility must meet the definition before a YE or NC status code can be entered for CA725. The NO status code should be entered if there are current unacceptable risks to humans due to releases of hazardous wastes or hazardous constituents from any SWMU(s) or AOC(s). The IN status code is designed to cover those cases where insufficient information is available to make an informed decision on whether or not human exposures are controlled. If an evaluation determines that there are both unacceptable and uncontrolled current risks to humans at the facility (NO) along with insufficient information on contamination or exposures at the facility (IN), then the priority for the EI recommendation is the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 Data Element Dictionary's inclusion of NO and IN to the existing YE

and NC status codes. In other words, YE, NC, NO and IN cover all of the scenarios possible in an evaluation or reevaluation of a facility for CA725. Therefore, it is Region 4's opinion that only YE, NC, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

B. GROUNDWATER RELEASES CONTROLLED
DETERMINATION (CA750)

There are five (5) status codes listed under CA750:

- 1) YE Yes, applicable as of this date.
- 2) NA Previous determination no longer applicable as of this date.
- 3) NR No releases to groundwater.
- 4) NO Facility does not meet definition.
- 5) IN More information needed.

The first three (3) status codes listed above were defined in January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in June 1997 Data Element Dictionary.

The status codes for CA750 are designed to measure the adequacy of actively (e.g., pump and treat) or passively (e.g., natural attenuation) controlling the physical movement of groundwater contaminated with hazardous constituents above relevant action levels. The designated boundary (e.g., the facility boundary, a line up gradient of receptors, the leading edge of the plume as defined by levels above action levels or cleanup standards, etc.) is the point where the success or failure of controlling the migration of hazardous constituents is measured for active control systems. Every contaminated area at the facility must be evaluated and found to have the migration of contaminated groundwater controlled before a "YE" status code can be entered.

If contaminated groundwater is not controlled in any area(s) of the facility, the NO status code should be entered. If there is not enough information at certain areas to make an

informed decision as to whether groundwater releases are controlled, then the IN status code should be entered. If an evaluation determines that there are both uncontrolled groundwater releases for certain units/areas (NO) and insufficient information at certain units/areas of groundwater contamination (IN), then the priority for the EI recommendation should be the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 Data Element Dictionary's inclusion of NO and IN to the existing YE and NR status codes. In other words, YE, NR, NO and IN cover all of the scenarios possible in an evaluation or reevaluation of a facility for CA750. Therefore, it is Region 4's opinion that only YE, NR, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

This evaluation for CA750 is the first formal evaluation performed for International Paper Company. Please note that CA750 is based on the adequate control of all contaminated groundwater at the facility.

The following interpretations and conclusions on contaminated groundwater at the facility are based on the reference documents listed at the end of Section II and media specific discussions contained in Section IV.

ATTACHMENT 2

MEDIA BY MEDIA DISCUSSION OF
CONTAMINATION AND THE STATUS OF
Plausible Human Exposures

Soil

The results of the confirmatory sampling and testing activities performed at the Wiggins Treated Wood Plant are briefly described below:

Group I SWMUs - Maintenance Shops/Fuel Area

The shallow soils are impacted at two areas: 1) where waste oils were stored behind the old maintenance shop, and 2) where vehicles were fueled in the past. Other areas investigated were not considered impacted.

Group II SWMUs - Treatment Area No.2

The shallow soils in the process area and to lesser extent in the area of the Wastewater Treatment Facility(WWTF), Boiler Blow Down/Process Wastewater and Carbon Storage Area, are impacted by PAHs and phenols. Soil at SWMUs 26 - Treatment Area No. 2 was impacted throughout the depths penetrated. Soils sampled along the drip track are impacted by site constituents.

Group III SWMUs - Treatment Area No.1

The shallow soils along the drip tracks and at the large PCP spill area (SWMU 38) are impacted with PAHs and phenols. Deeper borings at the following locations detected site constituents in the soils and groundwater: SWMU 39 - Sump-Treating Process Area; east of SWMU 25-CCA Tanks and SWMU 21 - Treated Area No.1: and associated with SWMU 22- Large PCP Drip Track.

Other SWMUs

SWMU 20-Old Peeler Area: Soils impacted by hydraulic oils.

SWMU 37-Site Drainage Ditches: The sediments sampled from both sides of the facility are impacted by various site constituents. Metals levels are elevated at two of the seven locations.

SWMU 38-PCP Spill Area: The shallow soils in the area are impacted by PAHs and Phenols.

Area of Concern A - Treated Wood Storage Yard: The shallow soils were sampled at eight locations. The impact of site constituents to the soils seems to be erratic.

Area of Concern B - Church House Branch: The shallow sediments are impacted by site constituents both up-stream and down-stream of the confluence with site drainage. Refer to Attachment-3.

Groundwater

No detailed groundwater investigation of SWMU areas has yet been conducted. A total of two groundwater grab samples were collected from two deep borings advanced at the facility near SWMU 21- Treatment Area No.1 and SWMU 25- CCA Tanks. These groundwater samples were collected to determine whether contaminants have reached the groundwater in these areas.

The groundwater near SWMU 21 was found to have PAHs, phenols and metals. PCP was detected at a maximum concentration at 1,130 ug/l. Metals concentrations are considered within normal background ranges for dissolved and total metal analyses. PCP, PAH or phenol constituents were detected in the ground water at SWMU 25 at concentrations quantified below the reporting limit estimated concentrations of 6.21 ug/l for SWMU 25. Dissolved and total metals concentrations in the groundwater were within the normal background concentration range.

As mentioned previously the facility is actively involved in a Corrective Action Program for the five RCRA-regulated units and five HSWA units utilizing a pump and treat process. The effluent from this process is either discharged in the Wiggins POTW or re-injected into one of the Recharge Wells (SWMU 30B). However, the complete delineation of the plume has not been completed under the treatment areas including all SWMUs. Additional investigations will be initiated under the RCRA Facility

Investigation (RFI) process.

AIR

Releases to the air from soil, groundwater and/or surface water are not anticipated to occur. The most applicable air scenario is the worker exposurer scenario. For the worker scenario it is estimated that a professional technician is on-site on a quarterly basis to collect groundwater samples. The technician is required to be skilled and specifically trained in the collection of samples and the personal protection requirements of the site. Therefore, due to the limited time that a technician is estimated to spend on-site, the required training of the technician to perform sampling in a professional and protective manner, there exists no plausible human exposure to contamination via an air route.

The facility has an Air Pollution Permit for the operation of Cleaver Brooks Boiler. The air emissions limitation include 4.8 lb/MMBTU of sulfur dioxide and 40 percent opacity.

Surface Water

The region is drained by southeastward flowing tributaries of the Pascagoula River, which discharge to the Gulf of Mexico. The Red and the Black Creeks are the largest of these tributaries.

The International Paper facility is drained by Church House Branch and an unnamed tributary to Red Creek. Church House Branch (AOC B), which originates in Wiggins, drains an area of approximately 1.2 square miles when it enters the eastern side of the facility. The unnamed tributary to Red Creek originates south of Wiggins and drains the western portion of the facility to the south. Both tributaries enter Red Creek several miles south of the facility. These streams and drainage ditches that drain International Paper tend to be intermittent. (Reference 94 mentioned in RFA Report dated July 1991)

The Flint Creek Reservoir, located approximately 2.5 miles north of the site, is used for recreational purposes only. Portions of Red Creek downstream of the junction with Church House Branch (AOC B) are also heavily used for recreational purposes.

Surface water quality in the area is generally good, with total dissolved solids averaging 45 mg/l. This value is usually

greater during low flow periods when the majority of the flow is derived from ground-water sources. Water in the area is a sodium potassium sulfate-chloride type, with suspended sediments and bacterial content limiting the utilization of surface waters.

Pentachlorophenol was detected in the surface waters of Church House Branch in September 1983. Visual and organoleptic evidence of wood treating chemicals was also detected in a test pit near the influence to Church House Branch(AOC B) and the drainage ditches (SWMU 37), which drain the recovery Ponds (SWMUs 8 to 10). A surface water sample from this area indicated only minor amount of PCP. (Reference 94 mentioned in RFA Report dated July 1991)

Other than what is reported above there are no existing surface water features on the site where an exposure could occur that would be harmful to human health; therefore, it is concluded that there are no plausible surface water human exposures which must be controlled.

ATTACHMENT-4
Solid waste Management units Summary

SWMU/AOC No	Description
1*	Land treatment Demonstration Unit
2**	sludge Pit #1
3**	Sludge Pit #2
4**	Sludge Pit #3
5**	Sludge Pit #4
6**	Sludge Pit #5
7*	Contact Cooling Water Pond
8*	Creosote Recovery Pond
9*	PCP Recovery Pond
10*	Cellon Recovery Pond

* SUMUs regulated by the State's Portion of the RCRA Permit adted March, 1987

** SWMUS under gone closure and are undergoing Corrective Action under HSWA portion of the Permit dated March 5, 1987.

(1)13	Waste Oil Storage Area
14	South Spent Carbon Storage Area
15	North Spent Carbon Storage Area
30	Ground-Water Treatment System

30c	Ground-Water Collection System
30D	Aeration Basin
30E	Aeration Basin
30F	Clarifier
30G	Discharge Tank
31	Storm water Containment Basin
34	Cylinder Sludge Drum Storage
35	Dumpsters
36	Surge Tanks

(1) SWMUs that require no further action.

SWMUs Requiring Confirmatory Sampling

16	Vehicle Wash Pad
17	Old Maintenance Shop
18	New Maintenance Shop
19	Filling Station
20	Peeler Area
21	Treatment Area-1-Secondary Containment Area discharge Valve
21A	Large PCP Cylinder

SWMUs/AOC No.	Description
21E	CCA Cylinder
21C	CCA Overflow Pit
21D	Large PCP Overflow Pit
22	Large PCP Drip Track
23	CCA Drip Track
24	Large PCP Tanks and their associated containment
24A	Recovery Tank #1
24B	Recovery Tank #2
24C	Recovery Tank #3
25	CCA Tanks and their associated containment
25A	Overflow Tank
25B	CCA Concentrate Tank
25C	CCA Effluent Tank
25D	CCA Work Tank #1
25E	CCA Work Tank #2
26	Treatment Area No.2
26A	Small PCP Collection Pit
26B	Former Creosote Cylinder
26C	Small PCP Collection Pit
27	Small PCP Drip Track

28	Small PCP Tanks and their associated containment
28A	Oil Recovery Tank
28B	Work Tank
29	Wastewater Treatment Facilities(WWTF)
29A	Spent Carbon Towers
29B	Spent Carbon SAA
29c	Floc Sludge Tank
29D	PCP Sludge Tank
29E	Test Sand Bed Filter
29F	Drum Accumulation Area
29g	Floc Tank
32	Carbon Concrete Ditch
33	Boiler Blowdown/Process Skimmer
37	Drainage Ditches
38	PCP Spill
39	Sump-Treating process Area
39A	Treated wood Storage Area
39B	Church House Branch

